

REMARKS

Claims 1-15 are pending in this application. By this Amendment, claims 1 and 8 are amended. Reconsideration of the application is respectfully requested.

The courtesies extended to Applicants' representative by Examiner Dang during the September 9, 2005 interview are gratefully appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

The Office Action rejects claims 1-4 and 8-11 under 35 U.S.C. §102(b) over Fitzgerald et al. (U.S. Patent No. 6,039,803); claims 5 and 12 under 35 U.S.C. §103(a) over Fitzgerald; claims 6, 7, 13 and 14 under 35 U.S.C. §103(a) over Fitzgerald in view of Takasaki (U.S. Patent No. 5,188,778); and claim 15 under 35 U.S.C. §103(a) over Fitzgerald in view of Mizushima et al. (U.S. Patent No. 6,525,338). The rejections are respectfully traversed.

As agreed during the personal interview and as suggested by the Examiner, none of the applied references disclose or suggest a method for fabricating a SiGe film and a substrate for epitaxial growth that include forming 90 degrees dislocations at a bottom region of a SiGe film adjacent to an interface of the SiGe film and the Si substrate, as recited in independent claim 1 and similarly recited in independent claim 8.

Moreover, the Patent Office indicates that Fitzgerald discloses an orthoganol dislocation grid made up of dislocations of the kind $\frac{1}{2}$ [110] and $\frac{1}{2}$ [110], reactions such as equations (1) and (2) can lead to the hexagonal network. That is, according to equations (1) and (2), a ray of 60% dislocations is evolved to form a ray of orthoganol 90% dislocations that make up the orthoganol network (see Office Action, page 2, lines 13-17). Applicants respectfully disagree.

The equations (1) and (2) in Fitzgerald simply illustrate that two 90% dislocations having displacement vectors of $\frac{1}{2}$ [110] and $\frac{1}{2}$ [-110] are combined to form a 90% dislocation

having a displacement vector of $[010]$ or $[100]$. However, those displacement vectors do not represent the result of the combination of two 60° dislocations. Furthermore, a 90° dislocation exhibits a displacement vector that is orthogonal to the dislocation line direction, and does not mean dislocations that are at right angles from each other. Although Fitzgerald may disclose the existence of 90° dislocations, the 90° dislocations form a hexagonal network that is substantially different from a network obtained as a result of, for example, the dislocations recited in the current claims or as shown, for example, in Figures 8A and 9. Accordingly, the dislocation network taught in Fitzgerald does not correspond to the dislocations recited in the current claims.

Accordingly, independent claims 1 and 8, and their dependent claims, are patentable over the applied references. As such, withdrawal of the rejections of the claims under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-15 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Tarik M. Nabi
Registration No. 55,478

JAO:TMN/tje

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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